

# PATENT

## IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

Docket No.: VOGEL

In re Application of:	)
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HARTMUT VOGEL	)
	)
Int. Appl. No.: PCT/EP2004/010815	)
	)
Int. Filing Date: September 27, 2004	)
	)
For: SQUIRREL-CAGE ROTOR	)

### FIRST PRELIMINARY AMENDMENT

Commissioner for Patents  
P.O. Box 1450  
Alexandria, VA 22313-1450

S I R:

Preliminary to the first Official Action in the above-entitled application, please amend the application as follows.

The Commissioner is hereby also authorized to charge any fees which may be required during the pendency of this application, including any patent application processing fees under 37 C.F.R. 1.17, and any filing fees under 37 C.F.R. 1.16, including presentation of extra claims, or credit any overpayment to Deposit Account No: 06-0502.

Please amend the above-entitled application as follows:

**AMENDMENTS TO THE SPECIFICATION WITH MARKINGS TO SHOW  
CHANGES MADE**

Before the title, delete "Description".

Before paragraph [0001], add the heading --BACKGROUND OF THE INVENTION--.

Before paragraph [0009], add the heading --SUMMARY OF THE INVENTION--.

Delete paragraph [0011].

Amend the following paragraphs:

[0012] -- [[The] According to one aspect of the invention, a squirrel-cage rotor includes squirrel-cage rotor conductors and a carrier for the squirrel-cage rotor conductors, with the carrier having axial slots in particular for accommodating the squirrel-cage rotor conductors. The axial slot includes hereby at least one closed slot portion and an open slot portion, with the open slot portion situated between the closed slot portion and a cage ring. --.

[0016] -- Advantageously, the open slot portion has an opening in the radially outer area of the slot. In this way, the rotor bar and the squirrel-cage rotor conductor can expand radially to the outside. Also the cage ring, which is mechanically connected to the squirrel-cage rotor conductors, undergoes i.a. a radially outwardly directed expansion during heating. As cage ring as well as squirrel-cage rotor conductor are thus able to jointly expand during heating in a same direction, mechanical stress is at least reduced.--.

Before paragraph [0030], add the heading --BRIEF DESCRIPTION OF THE DRAWING--.

Before paragraph [0033], add the heading --DETAILED DESCRIPTION OF PREFERRED EMBODIMENTS--.

Amend the following paragraphs:

**[0036]** -- In order to realize an open slot portion 13, material is removed from a closed slot in such a manner as to create an open slot portion 13. The illustration of FIG. 1 depicts hereby an area with stripped carrier material 21 and an area with stripped material 23 from the squirrel-cage rotor conductor. The squirrel-cage rotor conductors 3 end in the area of an end surface 29 of the squirrel-cage rotor 1. The squirrel-cage rotor conductors 3 are shorted there by means of a cage ring 15. The cage ~~rotor~~ ring 15 is disposed hereby advantageously directly adjacent to the carrier 5.--

**[0037]** -- The creation of the open slot portion 13 results in a flexible region of the squirrel-cage rotor conductor 3. When this squirrel-cage rotor conductor 3 is a rotor bar for example, a flexible conductor length of the rotor bar is established in the area of the open slot portion 13. When the squirrel-cage rotor conductor 3 and the cage ~~rotor~~ ring 15, respectively, heats up and expands, an expansion is made possible in the area of the open slot portion 13 into a radially outer region 17. Expansion into a radially inner region 19 is prevented in view of the presence of the carrier 5 there. The possibility to expand radially outwards as the squirrel-cage rotor 1 and in particular the squirrel-cage rotor conductor 3, which advantageously are rotor bars, heat up, enables a reduction in material stress especially in the carrier 5 during operation. In particular the area of the cage ring 15 is subjected to high temperatures during operation so that the region of the open slot portion adjacent to the cage ring 15 reduces disadvantageous stress in an especially advantageous manner also of the cage ~~rotor~~ ring 15 and the squirrel-cage rotor conductor 3, respectively, which are rotor bars in particular. FIG. 1 shows a section A, B.--

Page 10, after the heading "CLAIMS" and before the first claim add --What is claimed is:--.